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PATENT APPLICATION

Attorney Docket No. 00689-514



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Pepinsky *et al.*

SERIAL NUMBER: 09/832,658

EXAMINER: Fozia Hamud

FILING DATE: April 11, 2001

ART UNIT: 1647

FOR: POLYMER CONJUGATES OF INTERFERON BETA-1a AND USES

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AMENDMENT AND RESPONSE

This paper is in response to the November 15, 2002 Office Action ("Office Action"). With no extension of time, these documents are due on Wednesday, February 19, 2003 (Monday, February 17, 2003 being a holiday and the United States Patent and Trademark Office being closed on Tuesday, February 18, 2003). Please charge any payments or credit any overpayments of the same to Deposit Account No. 50-0311, reference 00689-514 (A065).

Please amend the claims as follows and consider the following remarks:

In the specification:

Please replace the paragraph beginning on page 16, line 19 with the following:

-- We found unique site(s) for polymer attachment that would not destroy function of the interferon-beta-1a. In addition, we also used site-directed mutagenesis methods to independently investigate site(s) for polymer attachment (See Example 1). Briefly, we undertook a mutational analysis of human interferon-beta-1a with the aim of mapping residues required for activity and receptor binding. The availability of the 3-D crystal structure of human interferon-beta-1a (see above and Example 1) allows us to identify, for alanine (or serine) substitutions, the solvent-exposed residues available for interferon beta receptor interactions, and to retain amino acids involved in intramolecular bonds. A panel of fifteen alanine scanning mutations were designed that replaced between two and eight residues along distinct regions of each of the helices (A (A1